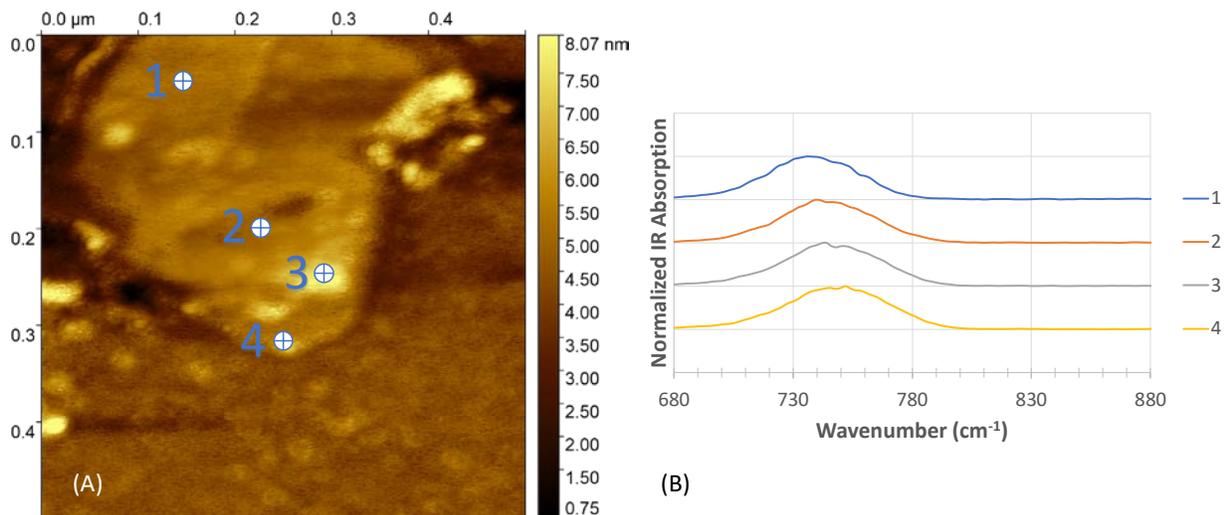


Detailed SEM and KPFM analysis of a 3D-printed Ti-6Al-4V alloy sample demonstrating technique for characterizing α laths by co-locating: (a) BSE imaging, (b) AFM height sensor (topography), (c) EBSD (white lines indicate α - β phase boundaries, black lines designate defined grain boundaries), and (d) KPFM Volta potential using a set of three triangular nanoindent fiducials, one of which is indicated by the white circles in (a)-(d). The results from line scans across hypermaps indicated by the white arrows in (a)-(d) are shown for (e) EBSD and (f) KPFM Volta potential. Adapted from Fig. 3 in Benzing, et al. *AIP Adv.* **11** (2), 025219, (2021) and licensed under a Creative Commons Attribution (CC BY) license.



(a) AFM topography image and (b) corresponding IR spectra obtained from an atomic layer deposited and etched (ALD/ALE) sample of WSe_2 on sapphire. Blue crosshair circles and numbers in (a) indicate the locations where the four numbered IR spectra shown in (b) were acquired via photothermal AFM-IR. Individual IR spectra are offset vertically for clarity.